

A Quantitative Sampling of the Mollusks of Batangas Bay, Philippines

BY

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(Plates 10 and 11; 1 Map; 2 Text figures)

ON A RECENT TRIP TO THE PHILIPPINES we had an opportunity to visit one of the world's most noteworthy collecting areas for mitrids, Batangas Bay in southern Luzon. We are greatly indebted to Mr. Fernando Dayrit for having arranged a day-trip to this area so that Mr. Cate and I could see it and sample the collecting there.

Two experienced divers employed by Mr. Dayrit (Plate 10, Figure 1) preceded us to the collecting grounds, and worked there for a total of three full days. With the exception of miscellaneous crabs, octopus and the like which they kept for food, we brought home with us their entire three-day catch. While we had expected to find a large number of mitrids in this material, as Batangas Bay is known to be one of the most productive areas in the world for this group, we were impressed by the large quantities and the diversity of other forms as well. This prompted me to put together the following checklist to record the various forms found, and to indicate their relative abundance within a comparatively limited area at that particular time. It should be stressed that this list is not intended to be a complete catalog of all mollusks that have been or are to be found in Batangas Bay, but merely of those collected during the three days in mid-November 1966 by the two expert divers.

Batangas Bay, situated about 100 kilometers south of Manila, is reached over a good paved road (see dotted line on Map). Our destination was Bauan Town; more specifically, the area in front of the CalTex refinery, where the company personnel graciously permitted us to park on the fenced and guarded property and to use the convenient supply of fresh water.

Batangas Bay is about 16 km wide at its mouth, and some 12 km long from the refinery area southward to the open sea; its depth (according to a hydrographic

chart) ranges to approximately 140 fathoms, though it seems fairly shallow near the shore and a long pier had to be built to accommodate oil tankers and other oceangoing vessels (see Plate 10, Figure 2). The collectors were free-diving in about 4 to 5 fathoms, approximately a mile or two south-southwest of the refinery (see Map).

The substrate is an extremely fine silty black mud several inches deep at the point where we attempted to collect in knee-deep water; it is probably of much the same type over most of the bay, judging by the material found clinging to the specimens brought in by the divers. To our disappointment at first, we found that the shallow water near the refinery was polluted by oil seepage, and the shells we were able to collect without swimming out into deeper, cleaner water were all dead. Furthermore, the nature of the substrate made it very difficult to see bottom after the silt had been stirred up by our wading, for great lingering clouds of suspended material obscured the view of any mollusk tracks or even of the bleached, white dead shells. However, our disappointment was soon forgotten when we saw the first sackful of mollusks spread out for our inspection by the divers; it is a tribute to their skill that they were able to locate so many small items that would ordinarily have been extremely difficult to find in the soft mud. Subsequent dives resulted in an array of specimens to satisfy the most exacting collector (see Plate 10, Figure 3): cones, terebras, turrids, bursas, cassis, harpas, strombids and many other forms were displayed before us, in addition to 23 species of *Mitra* and *Vexillum*. In all, 903 specimens were collected, representing 114 species in 33 families. I have listed them all below in systematic order.

The Mitridae provided the greatest number of species, with a total of 23; however, a number of these were

Table 1

	Number of	
	Species	Specimens
GASTROPODA		
Melaniidae	2	4
Thiaridae	1	1
Turbinidae	2	2
Architectonicidae	2	4
Cerithiidae	2	41
Xenophoridae	1	1
Strombidae	3	4
Cypraeidae	3	9
Naticidae	4	5
Cassididae	3	4
Bursidae	1	25
Tonnidae	1	5
Ficidae	1	2
Muricidae	2	3
Columbellidae	3	4
Cymatiidae	1	9
Buccinidae	5	50
Nassariidae	2	4
Fascioliariidae	2	4
Olividae	3	34
Mitridae	23	152
Harpidae	1	2
Cancellariidae	3	4
Turridae	7	118
Conidae	16	355
Terebridae	10	39
Atyidae	1	2
Ellobiidae	1	1
	106	888
SCAPHOPODA		
Dentaliidae	2	6
PELECYPODA		
Carditidae	1	2
Veneridae	1	1
Tellinidae	1	1
Psammobiidae	2	5
	5	9
Totals	113	903

represented by only a few specimens, so that the total of 152 mitrid shells came as a poor second to the Conidae, which had the second highest number of species (16), but an extremely high number of specimens (355).

The group of mitrids contained a few surprises for me in that certain species usually considered relatively common were represented by only one or two specimens (*e. g.*, *Mitra filaris* [1], *M. granatina* [1 dead] *M. clathrus* [2]);

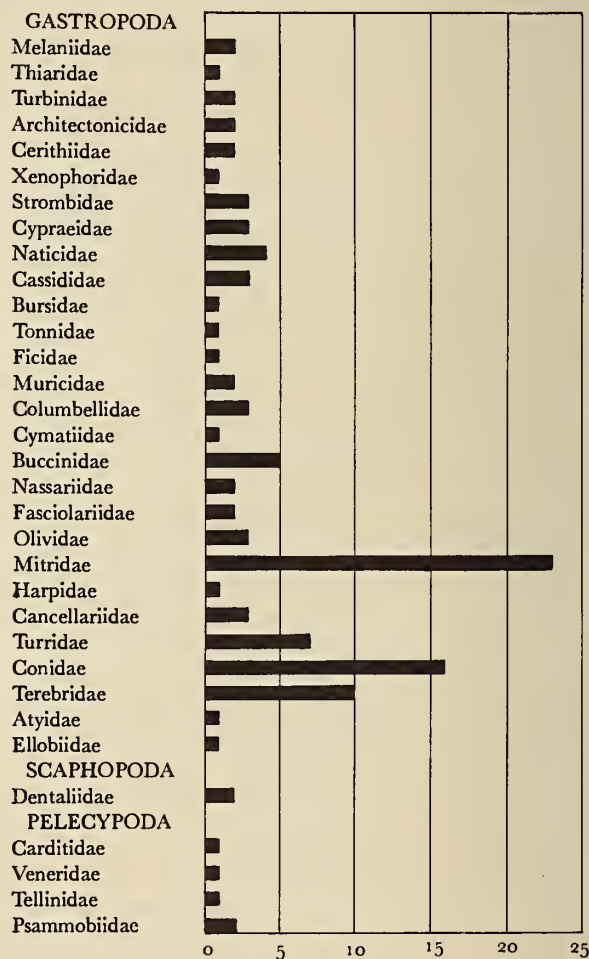


Figure 1

Illustrating the number of species in each family-group

Explanation of Plate 11

Figures 1 a, 1 b: *Mitra suturata* REEVE, 1845 (x 3½)

Figures 2 a, 2 b: *Vexillum coccineum* (REEVE, 1844) (x 7)

Figures 3 a, 3 b: *Vexillum ligatum* (A. ADAMS, 1853) (x 3½)

Figures 4 a, 4 b: *Vexillum marmorca* (A. ADAMS, 1853) (x 3½)

Figures 9 a, 9 b: *Pusia* spec. indet. (x 5)

Figures 5 a, 5 b: *Vexillum rectilateralis* (SOWERBY, 1874) (x 2½)

Figures 6 a, 6 b: *Vexillum rusticum* (REEVE, 1845) (x 3)

Figures 7 a, 7 b: *Vexillum spicatum* (REEVE, 1845) (x 3½)

Figures 8 a, 8 b: *Vexillum vulpecula* (LINNAEUS, 1758) (x 1¼)



Figure 1



Figure 2



Figure 3

Figure 1: Divers from Samar who collected the shells in this study

Figure 2: General view of Batangas Bay

Figure 3: Results of the first dive made by the two divers in Figure 1

